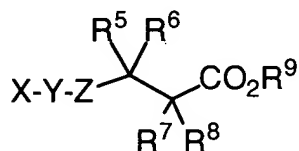


**CLAIM AMENDMENTS**

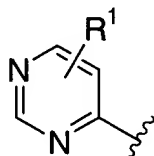
This listing of claims will replace all prior versions, and listings of claims in the application:

**Claims 1-40 (Previously canceled)**

**Claim 41 (Currently Amended)** A compound of the formula

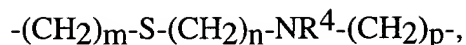


wherein X is



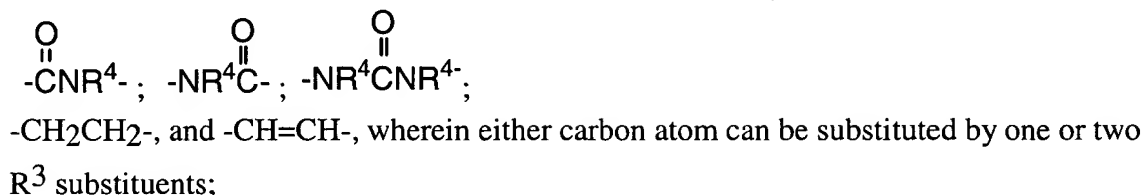
Y is selected from the group consisting of

- (CH<sub>2</sub>)<sub>m</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>n</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-S-(CH<sub>2</sub>)<sub>n</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-SO-(CH<sub>2</sub>)<sub>n</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>n</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>n</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-S-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-S-(CH<sub>2</sub>)<sub>n</sub>-S-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>n</sub>-S-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>n</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-,
- (CH<sub>2</sub>)<sub>m</sub>-S-(CH<sub>2</sub>)<sub>n</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-, and



wherein any methylene ( $\text{CH}_2$ ) carbon atom in Y, other than in  $\text{R}^4$ , can be substituted by one or two  $\text{R}^3$  substituents;

Z is selected from the group consisting of



$\text{R}^1$  and  $\text{R}^2$  are each independently selected from the group consisting of

hydrogen, halogen,  $\text{C}_{1-10}$  alkyl,  $\text{C}_{3-8}$  cycloalkyl,  
 $\text{C}_{3-8}$  cycloheteroalkyl,  $\text{C}_{3-8}$  cycloalkyl  $\text{C}_{1-6}$  alkyl,  
 $\text{C}_{3-8}$  cycloheteroalkyl  $\text{C}_{1-6}$  alkyl, aryl, aryl  $\text{C}_{1-8}$  alkyl, amino,  
amino  $\text{C}_{1-8}$  alkyl,  $\text{C}_{1-3}$  acylamino,  $\text{C}_{1-3}$  acylamino  $\text{C}_{1-8}$  alkyl,  
( $\text{C}_{1-6}$  alkyl)<sub>p</sub>amino, ( $\text{C}_{1-6}$  alkyl)<sub>p</sub>amino  $\text{C}_{1-8}$  alkyl,  
 $\text{C}_{1-4}$  alkoxy,  $\text{C}_{1-4}$  alkoxy  $\text{C}_{1-6}$  alkyl, hydroxycarbonyl,  
hydroxycarbonyl  $\text{C}_{1-6}$  alkyl,  $\text{C}_{1-3}$  alkoxycarbonyl,  
 $\text{C}_{1-3}$  alkoxycarbonyl  $\text{C}_{1-6}$  alkyl, hydroxycarbonyl-  
 $\text{C}_{1-6}$  alkyloxy, hydroxy, hydroxy  $\text{C}_{1-6}$  alkyl,  $\text{C}_{1-6}$  alkyloxy-  
 $\text{C}_{1-6}$  alkyl, nitro, cyano, trifluoromethyl, trifluoromethoxy,  
trifluoroethoxy,  $\text{C}_{1-8}$  alkyl-S(O)<sub>p</sub>, ( $\text{C}_{1-8}$ alkyl)<sub>p</sub>aminocarbonyl,  
 $\text{C}_{1-8}$  alkyloxycarbonylamino, ( $\text{C}_{1-8}$  alkyl)<sub>p</sub>aminocarbonyloxy,  
(aryl  $\text{C}_{1-8}$  alkyl)<sub>p</sub>amino, (aryl)<sub>p</sub>amino, aryl  $\text{C}_{1-8}$   
alkylsulfonylamino, and  $\text{C}_{1-8}$  alkylsulfonylamino;  
or two  $\text{R}^1$  substituents, when on the same carbon atom, are taken together with the carbon  
atom to which they are attached to form a carbonyl group;

each  $\text{R}^3$  is independently selected from the group consisting of  
hydrogen,

aryl,  
C<sub>1-10</sub> alkyl,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-O-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-S(O)<sub>p</sub>-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-C(O)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-C(O)-N(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-N(R<sup>4</sup>)-C(O)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-N(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>s</sub>-,  
halogen,  
hydroxyl,  
oxo,  
trifluoromethyl,  
C<sub>1-8</sub> alkylcarbonylamino,  
aryl C<sub>1-5</sub> alkoxy,  
C<sub>1-5</sub> alkoxycarbonyl,  
(C<sub>1-8</sub> alkyl)paminocarbonyl,  
C<sub>1-6</sub> alkylcarbonyloxy,  
C<sub>3-8</sub> cycloalkyl,  
(C<sub>1-6</sub> alkyl)pamino,  
amino C<sub>1-6</sub> alkyl,  
arylaminocarbonyl,  
aryl C<sub>1-5</sub> arylaminocarbonyl,  
aminocarbonyl,  
aminocarbonyl C<sub>1-6</sub> alkyl,  
hydroxycarbonyl,  
hydroxycarbonyl C<sub>1-6</sub> alkyl,  
HC≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>3-7</sub> cycloalkyl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
aryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
CH<sub>2</sub>=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>3-7</sub> cycloalkyl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,

aryl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkoxy,  
aryl C<sub>1-6</sub> alkoxy,  
aryl C<sub>1-6</sub> alkyl,  
(C<sub>1-6</sub> alkyl)<sub>p</sub>amino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>amino,  
(aryl)<sub>p</sub>amino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-6</sub> alkyl)<sub>p</sub>amino,  
(aryl C<sub>1-6</sub> alkyl)<sub>p</sub>amino C<sub>1-6</sub> alkyl,  
arylcabonyloxy,  
aryl C<sub>1-6</sub> alkylcabonyloxy,  
(C<sub>1-6</sub> alkyl)<sub>p</sub>aminocabonyloxy,  
C<sub>1-8</sub> alkylsulfonylamino,  
arylsulfonylamino,  
C<sub>1-8</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
arylsulfonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonylamino,  
aryl C<sub>1-6</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-8</sub> alkoxycarbonylamino,  
C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
aryloxycarbonylamino C<sub>1-8</sub> alkyl,  
aryl C<sub>1-8</sub> alkoxycarbonylamino,  
aryl C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
C<sub>1-8</sub> alkylcarbonylamino,  
C<sub>1-8</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
arylcabonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonylamino,  
aryl C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
aminocabonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocabonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocabonylamino C<sub>1-6</sub> alkyl,

(aryl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
aminosulfonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylsulfonyl,  
C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkyl,  
arylsulfonyl C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonyl,  
aryl C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylcarbonyl,  
C<sub>1-6</sub> alkylcarbonyl C<sub>1-6</sub> alkyl,  
arylcarbonyl C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonyl,  
aryl C<sub>1-6</sub> alkylcarbonyl C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylthiocarbonylamino,  
C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
arylthiocarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminocarbonyl C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl, and  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl C<sub>1-6</sub> alkyl;

or two R<sup>3</sup> substituents, when on the same carbon atom are taken together with the carbon atom to which they are attached to form a carbonyl group or a cyclopropyl group, wherein any of the alkyl groups of R<sup>3</sup> are either unsubstituted or substituted with one to three R<sup>1</sup> substituents, and provided that each R<sup>3</sup> is selected such that in the resultant compound the carbon atom or atoms to which R<sup>3</sup> is attached is itself attached to no more than one heteroatom;

each R<sup>4</sup> is independently selected from the group consisting of

hydrogen,  
aryl,  
aminocarbonyl,  
C<sub>3-8</sub> cycloalkyl,  
amino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminocarbonyl,  
(aryl C<sub>1-5</sub> alkyl)<sub>p</sub>aminocarbonyl,  
hydroxycarbonyl C<sub>1-6</sub> alkyl,  
C<sub>1-8</sub> alkyl,  
aryl C<sub>1-6</sub> alkyl,  
(C<sub>1-6</sub> alkyl)<sub>p</sub>amino C<sub>2-6</sub> alkyl,  
(aryl C<sub>1-6</sub> alkyl)<sub>p</sub>amino C<sub>2-6</sub> alkyl,  
C<sub>1-8</sub> alkylsulfonyl,  
C<sub>1-8</sub> alkoxycarbonyl,  
aryloxycarbonyl,  
aryl C<sub>1-8</sub> alkoxycarbonyl,  
C<sub>1-8</sub> alkylcarbonyl,  
arylcarbonyl,  
aryl C<sub>1-6</sub> alkylcarbonyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl,  
aminosulfonyl,  
C<sub>1-8</sub> alkylaminosulfonyl,  
(aryl)<sub>p</sub>aminosulfonyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonyl,  
arylsulfonyl,  
arylC<sub>1-6</sub> alkylsulfonyl,  
C<sub>1-6</sub> alkylthiocarbonyl,  
arylthiocarbonyl, and  
aryl C<sub>1-6</sub> alkylthiocarbonyl,

wherein any of the alkyl groups of R<sup>4</sup> are either unsubstituted or substituted with one to three R<sup>1</sup> substituents;

R<sup>5</sup> and R<sup>6</sup> are each independently selected from the group consisting of

hydrogen,  
C<sub>1-10</sub> alkyl,  
aryl,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-O-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-S(O)<sub>p</sub>-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-C(O)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-C(O)-N(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-N(R<sup>4</sup>)-C(O)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-N(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>s</sub>-,  
halogen,  
hydroxyl,  
C<sub>1-8</sub> alkylcarbonylamino,  
aryl C<sub>1-5</sub> alkoxy,  
C<sub>1-5</sub> alkoxycarbonyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl,  
C<sub>1-6</sub> alkylcarbonyloxy,  
C<sub>3-8</sub> cycloalkyl,  
(C<sub>1-6</sub> alkyl)<sub>p</sub>amino,  
amino C<sub>1-6</sub> alkyl,  
arylaminocarbonyl,  
aryl C<sub>1-5</sub> alkylaminocarbonyl,  
aminocarbonyl,  
aminocarbonyl C<sub>1-6</sub> alkyl,  
hydroxycarbonyl,  
hydroxycarbonyl C<sub>1-6</sub> alkyl,  
HC≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>3-7</sub> cycloalkyl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
aryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
CH<sub>2</sub>=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>3-7</sub> cycloalkyl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,

aryl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkoxy,  
aryl C<sub>1-6</sub> alkoxy,  
aryl C<sub>1-6</sub> alkyl,  
(C<sub>1-6</sub> alkyl)pamino C<sub>1-6</sub> alkyl,  
(aryl)pamino,  
(aryl)pamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-6</sub> alkyl)pamino,  
(aryl C<sub>1-6</sub> alkyl)pamino C<sub>1-6</sub> alkyl,  
arylcarbonyloxy,  
aryl C<sub>1-6</sub> alkylcarbonyloxy,  
(C<sub>1-6</sub> alkyl)paminocarbonyloxy,  
C<sub>1-8</sub> alkylsulfonylamino,  
arylsulfonylamino,  
C<sub>1-8</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
arylsulfonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonylamino,  
aryl C<sub>1-6</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-8</sub> alkoxycarbonylamino,  
C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
aryloxycarbonylamino C<sub>1-8</sub> alkyl,  
aryl C<sub>1-8</sub> alkoxycarbonylamino,  
aryl C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
C<sub>1-8</sub> alkylcarbonylamino,  
C<sub>1-8</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
arylcarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonylamino,  
aryl C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
aminocarbonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)paminocarbonylamino,  
(C<sub>1-8</sub> alkyl)paminocarbonylamino C<sub>1-6</sub> alkyl,



(aryl)paminocarbonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)paminocarbonylamino,  
(aryl C<sub>1-8</sub> alkyl)paminocarbonylamino C<sub>1-6</sub> alkyl,  
aminosulfonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)paminosulfonylamino,  
(C<sub>1-8</sub> alkyl)paminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl)paminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)paminosulfonylamino,  
(aryl C<sub>1-8</sub> alkyl)paminosulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylsulfonyl,  
C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkyl,  
arylsulfonyl C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonyl,  
aryl C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylcarbonyl,  
C<sub>1-6</sub> alkylcarbonyl C<sub>1-6</sub> alkyl,  
arylcarbonyl C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonyl,  
aryl C<sub>1-6</sub> alkylcarbonyl C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylthiocarbonylamino,  
C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
arylthiocarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)paminocarbonyl C<sub>1-6</sub> alkyl,  
(aryl)paminocarbonyl C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)paminocarbonyl, and  
(aryl C<sub>1-8</sub> alkyl)paminocarbonyl C<sub>1-6</sub> alkyl;

or R<sup>5</sup> and R<sup>6</sup> are taken together with the carbon atom to which they are attached to form a carbonyl group,

wherein any of the alkyl groups of R<sup>5</sup> or R<sup>6</sup> are either unsubstituted or substituted with one to three R<sup>1</sup> substituents, and provided that each R<sup>5</sup> and R<sup>6</sup> are selected such that in the resultant compound the carbon atom to which R<sup>5</sup> and R<sup>6</sup> are attached is itself attached to no more than one heteroatom;

R<sup>7</sup> and R<sup>8</sup> are each independently selected from the group consisting of

hydrogen,  
C<sub>1-10</sub> alkyl,  
aryl,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-O-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-S(O)<sub>p</sub>-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-C(O)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-C(O)-N(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-N(R<sup>4</sup>)-C(O)-(CH<sub>2</sub>)<sub>s</sub>-,  
aryl-(CH<sub>2</sub>)<sub>r</sub>-N(R<sup>4</sup>)-(CH<sub>2</sub>)<sub>s</sub>-,  
halogen,  
hydroxyl,  
C<sub>1-8</sub> alkylcarbonylamino,  
aryl C<sub>1-5</sub> alkoxy,  
C<sub>1-5</sub> alkoxycarbonyl,  
(C<sub>1-8</sub> alkyl)paminocarbonyl,  
C<sub>1-6</sub> alkylcarbonyloxy,  
C<sub>3-8</sub> cycloalkyl,  
(C<sub>1-6</sub> alkyl)pamino,  
amino C<sub>1-6</sub> alkyl,  
arylaminocarbonyl,  
aryl C<sub>1-5</sub> alkylaminocarbonyl,  
aminocarbonyl,  
aminocarbonyl C<sub>1-6</sub> alkyl,  
hydroxycarbonyl,  
hydroxycarbonyl C<sub>1-6</sub> alkyl,  
HC≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>3-7</sub> cycloalkyl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
aryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
CH<sub>2</sub>=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>3-7</sub> cycloalkyl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,

aryl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-CH=CH-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkyl-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkylaryl-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>t</sub>-,  
C<sub>1-6</sub> alkoxy,  
aryl C<sub>1-6</sub> alkoxy,  
aryl C<sub>1-6</sub> alkyl,  
(C<sub>1-6</sub> alkyl)<sub>p</sub>amino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>amino,  
(aryl)<sub>p</sub>amino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-6</sub> alkyl)<sub>p</sub>amino,  
(aryl C<sub>1-6</sub> alkyl)<sub>p</sub>amino C<sub>1-6</sub> alkyl,  
arylcarbonyloxy,  
aryl C<sub>1-6</sub> alkylcarbonyloxy,  
(C<sub>1-6</sub> alkyl)<sub>p</sub>aminocarbonyloxy,  
C<sub>1-8</sub> alkylsulfonylamino,  
arylcarbonylamino,  
arylsulfonylamino,  
C<sub>1-8</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
arylsulfonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonylamino,  
aryl C<sub>1-6</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-8</sub> alkoxycarbonylamino,  
C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
aryloxycarbonylamino C<sub>1-8</sub> alkyl,  
aryl C<sub>1-8</sub> alkoxycarbonylamino,  
aryl C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
C<sub>1-8</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
arylcarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonylamino,  
aryl C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
aminocarbonylamino C<sub>1-6</sub> alkyl,  
arylaminocarbonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,

(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
aminosulfonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylsulfonyl,  
C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkyl,  
arylsulfonyl C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonyl,  
aryl C<sub>1-6</sub> alkylsulfonyl C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylcarbonyl,  
C<sub>1-6</sub> alkylcarbonyl C<sub>1-6</sub> alkyl,  
arylcarbonyl C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonyl,  
aryl C<sub>1-6</sub> alkylcarbonyl C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylthiocarbonylamino,  
C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
arylthiocarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminocarbonyl C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonyl C<sub>1-6</sub> alkyl, and  
C<sub>7-20</sub> polycyclyl C<sub>0-8</sub> alkylsulfonylamino,

wherein any of the alkyl groups of R<sup>7</sup> and R<sup>8</sup> are either unsubstituted or substituted with one to three R<sup>1</sup> substituents, and provided that each R<sup>7</sup> and R<sup>8</sup> are selected such that in the resultant compound the carbon atom to which R<sup>7</sup> and R<sup>8</sup> are attached is itself attached to no more than one heteroatom;

R<sup>9</sup> is selected from the group consisting of

hydrogen,  
C<sub>1-8</sub> alkyl,  
aryl,  
aryl C<sub>1-8</sub> alkyl,  
C<sub>1-8</sub> alkylcarbonyloxy C<sub>1-4</sub> alkyl,  
aryl C<sub>1-8</sub> alkylcarbonyloxy C<sub>1-4</sub> alkyl,  
C<sub>1-8</sub> alkylaminocarbonylmethylene, and  
C<sub>1-8</sub> dialkylaminocarbonylmethylene;

wherein

each m is independently an integer from 0 to 6;

each n is independently an integer from 0 to 6;

each p is independently an integer from 0 to 2;

each r is independently an integer from 1 to 3;

each s is independently an integer from 0 to 3; and

each t is independently an integer from 0 to 3;

**provided that when Y is -(CH<sub>2</sub>)<sub>m</sub>- and m is 0, then at least one of**

**R<sup>5</sup>-R<sup>9</sup> is other than a hydrogen;**

and the pharmaceutically acceptable salts thereof.

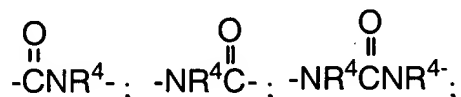
**Claim 42 (Previously Amended)** The compound of Claim 41 wherein Y is selected from the group consisting of

-(CH<sub>2</sub>)<sub>m</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>n</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-S-(CH<sub>2</sub>)<sub>n</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-SO-(CH<sub>2</sub>)<sub>n</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-SO<sub>2</sub>-(CH<sub>2</sub>)<sub>n</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-O-(CH<sub>2</sub>)<sub>p</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-O-(CH<sub>2</sub>)<sub>n</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>p</sub>-,  
-(CH<sub>2</sub>)<sub>m</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>n</sub>-NR<sup>4</sup>-(CH<sub>2</sub>)<sub>p</sub>-, and



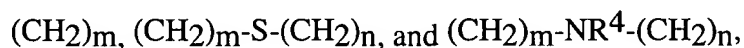
wherein any methylene ( $\text{CH}_2$ ) carbon atom in Y, other than in  $\text{R}^4$ , can be substituted by one or two  $\text{R}^3$  substituents;

and Z is selected from the group consisting of



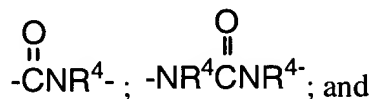
$-\text{CH}_2\text{CH}_2-$ , and  $-\text{CH}=\text{CH}-$ , wherein either carbon atom can be substituted by one or two  $\text{R}^3$  substituents.

**Claim 43 (Previously Amended)** The compound of Claim 42 wherein Y is selected from the group consisting of



wherein any methylene ( $\text{CH}_2$ ) carbon atom in Y, other than in  $\text{R}^4$ , can be substituted by one or two  $\text{R}^3$  substituents;

and Z is selected from the group consisting of



$-\text{CH}_2\text{CH}_2-$ , wherein either carbon atom can be substituted by one or two  $\text{R}^3$  substituents.

**Claim 44 (Original)** The compound of Claim 43 wherein each  $\text{R}^3$  is independently selected from the group consisting of

hydrogen,  
fluoro,  
trifluoromethyl,  
aryl,  
 $\text{C}_{1-8}$  alkyl,

arylC<sub>1-6</sub> alkyl  
hydroxyl,  
oxo,  
arylamino-carbonyl,  
aryl C<sub>1-5</sub> alkylamino-carbonyl,  
amino-carbonyl, and  
amino-carbonyl C<sub>1-6</sub> alkyl;

and each R<sup>4</sup> is independently selected from the group consisting of

hydrogen,  
aryl,  
C<sub>3-8</sub> cycloalkyl,  
C<sub>1-8</sub> alkyl,  
C<sub>1-8</sub> alkylcarbonyl,  
arylcarbonyl,  
C<sub>1-6</sub> alkylsulfonyl,  
arylsulfonyl,  
arylC<sub>1-6</sub>alkylsulfonyl,  
arylC<sub>1-6</sub>alkylcarbonyl,  
C<sub>1-8</sub>alkylamino-carbonyl,  
arylC<sub>1-5</sub>alkylamino-carbonyl,  
arylC<sub>1-8</sub>alkoxycarbonyl, and  
C<sub>1-8</sub>alkoxycarbonyl.

**Claim 45 (Original)** The compound of Claim 44 wherein R<sup>6</sup>, R<sup>7</sup>, and R<sup>8</sup> are each hydrogen and R<sup>5</sup> is selected from the group consisting of

hydrogen,  
aryl,  
C<sub>1-8</sub> alkyl,  
aryl-C≡C-(CH<sub>2</sub>)<sub>t</sub>-,  
aryl C<sub>1-6</sub> alkyl,  
CH<sub>2</sub>=CH-(CH<sub>2</sub>)<sub>t</sub>-, and  
HC≡C-(CH<sub>2</sub>)<sub>t</sub>-.

**Claim 46 (Original)** The compound of Claim 45 wherein R<sup>9</sup> is selected from the group consisting of hydrogen, methyl, and ethyl.

**Claim 47 (Original)** The compound of Claim 46 wherein R<sup>9</sup> is hydrogen.

**Claim 48 (Original)** The compound of Claim 44 wherein R<sup>5</sup>, R<sup>6</sup>, and R<sup>8</sup> are each hydrogen and R<sup>7</sup> is selected from the group consisting of

hydrogen,  
aryl,  
C<sub>1-8</sub> alkylcarbonylamino,  
C<sub>1-8</sub> alkylsulfonylamino,  
arylcarbonylamino,  
arylsulfonylamino,  
C<sub>1-8</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
arylsulfonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylsulfonylamino,  
aryl C<sub>1-6</sub> alkylsulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-8</sub> alkoxycarbonylamino,  
C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
aryloxy carbonylamino C<sub>1-8</sub> alkyl,  
aryl C<sub>1-8</sub> alkoxycarbonylamino,  
aryl C<sub>1-8</sub> alkoxycarbonylamino C<sub>1-8</sub> alkyl,  
C<sub>1-8</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
arylcarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylcarbonylamino,  
aryl C<sub>1-6</sub> alkylcarbonylamino C<sub>1-6</sub> alkyl,  
aminocarbonylamino C<sub>1-6</sub> alkyl,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
arylaminocarbonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino C<sub>1-6</sub> alkyl,  
aminosulfonylamino C<sub>1-6</sub> alkyl,



(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino C<sub>1-6</sub> alkyl,  
C<sub>1-6</sub> alkylthiocarbonylamino,  
C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl,  
arylthiocarbonylamino C<sub>1-6</sub> alkyl,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino,  
aryl C<sub>1-6</sub> alkylthiocarbonylamino C<sub>1-6</sub> alkyl, and  
C<sub>7-20</sub> polycyclyl C<sub>0-8</sub> alkylsulfonylamino.

**Claim 49 (Original)** The compound of Claim 48 wherein R<sup>5</sup>, R<sup>6</sup>, and R<sup>8</sup> are each hydrogen and R<sup>7</sup> is selected from the group consisting of

hydrogen,  
aryl,  
C<sub>1-8</sub> alkylcarbonylamino,  
aryl C<sub>1-6</sub> alkylcarbonylamino,  
arylcarbonylamino,  
C<sub>1-8</sub> alkylsulfonylamino,  
aryl C<sub>1-6</sub> alkylsulfonylamino,  
arylsulfonylamino,  
C<sub>1-8</sub> alkoxy carbonylamino,  
aryl C<sub>1-8</sub> alkoxy carbonylamino,  
arylaminocarbonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminocarbonylamino,  
(C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino, and  
(aryl C<sub>1-8</sub> alkyl)<sub>p</sub>aminosulfonylamino.

**Claim 50 (Original)** The compound according to Claim 49 wherein R<sup>9</sup> is selected from the group consisting of hydrogen, methyl, and ethyl.

**Claim 51 (Original)** The compound according to Claim 50 wherein R<sup>9</sup> is hydrogen.

**Claim 52 (Original)** The compound of Claim 44 which is:

3-[5-(2-Amino-pyrimidin-4-yl)-pentanoylamino]-3(S)-(quinolin-3-yl)-propionic acid;  
and the pharmaceutically acceptable salts thereof.

**Claim 53 (Original)** A pharmaceutical composition comprising a therapeutically effective amount of a compound of Claim 41 and a pharmaceutically acceptable carrier.

**Claim 54 (Original)** The composition of Claim 53 which further comprises an active ingredient selected from the group consisting of

- a) an organic bisphosphonate or a pharmaceutically acceptable salt or ester thereof,
- b) an estrogen receptor modulator,
- c) a cytotoxic/antiproliferative agent,
- d) a matrix metalloproteinase inhibitor,
- e) an inhibitor of epidermal-derived, fibroblast-derived, or platelet-derived growth factors,
- f) an inhibitor of VEGF,
- g) an inhibitor of Flk-1/KDR, Flt-1, Tck/Tie-2, or Tie-1,
- h) a cathepsin K inhibitor, and
- i) a farnesyl transferase inhibitor or a geranylgeranyl transferase inhibitor or a dual farnesyl/geranylgeranyl transferase inhibitor;  
and mixtures thereof.

**Claim 55 (Original)** The composition of Claim 54 wherein said active ingredient is selected from the group consisting of

- a) an organic bisphosphonate or a pharmaceutically acceptable salt or ester thereof,
- b) an estrogen receptor modulator, and
- c) a cathepsin K inhibitor;  
and mixtures thereof.

**Claim 56 (Original)** The composition of Claim 55 wherein said organic bisphosphonate or pharmaceutically acceptable salt or ester thereof is alendronate monosodium trihydrate.

**Claim 57 (Original)** The composition of Claim 54 wherein said active ingredient is selected from the group consisting of

- a) a cytotoxic/antiproliferative agent,
  - b) a matrix metalloproteinase inhibitor,
  - c) an inhibitor of epidermal-derived, fibroblast-derived, or platelet-derived growth factors,
  - d) an inhibitor of VEGF,
  - e) an inhibitor of Flk-1/KDR, Flt-1, Tck/Tie-2, or Tie-1, and
  - f) a cathepsin K inhibitor;
- and mixtures thereof.

**Claim 58 (Original)** A method of eliciting an integrin receptor antagonizing effect in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 41.

**Claim 59 (Original)** The method of Claim 58 wherein the integrin receptor antagonizing effect is an  $\alpha v \beta 3$  antagonizing effect.

**Claim 60 (Original)** The method of Claim 59 wherein the  $\alpha v \beta 3$  antagonizing effect is selected from the group consisting of inhibition of bone resorption, restenosis, angiogenesis, diabetic retinopathy, macular degeneration, inflammation, viral disease, tumor growth, and metastasis.

**Claim 61 (Original)** The method of Claim 60 wherein the  $\alpha v \beta 3$  antagonizing effect is the inhibition of bone resorption.

**Claim 62 (Original)** A method of inhibiting bone resorption in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of the composition of Claim 53.

**Claim 63 (Original)** A method of inhibiting bone resorption in a mammal in need thereof, comprising administering to the mammal a therapeutically effective amount of the composition of Claim 55.